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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/251,998	02/19/1999	RICHARD BAXTER HULL	5-4-1-4	3940

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EXAMINER

ENGLAND, DAVID E

ART UNIT	PAPER NUMBER
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2143

DATE MAILED: 11/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/251,998

Applicant(s)

HULL ET AL.

Examiner

David E. England

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1 – 21 are presented for examination.

Response to Arguments

In view of the appeal brief filed on 08/15/2003, PROSECUTION IS HEREBY REOPENED.

New grounds of rejection are- set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

- (1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,
- (2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

1. Applicant's arguments with respect to claims 1 – 21 have been considered but are moot in view of the new ground(s) of rejection.

Double Patenting

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2. The nonstatutory double patenting rejection, whether of obvious-type or non-obvious-type, is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

3. A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

4. Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1 – 21 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 - 28 of U.S. Patent No. 6424948 (hereinafter '948').

6. The Examiner can ascertain no difference between the claims of the present application and that of '948'. It is noted that the minor difference encompass replacement of the recitations of the limitations in the claims and it appears to be substantially the same or duplicate or in some

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instances obvious over one another. For example, claim 1, method performed by a workflow system using side-effect actions is found in claim 1 of '948' Patent, except '948' specifically discloses acyclic enabling conditions. Both inventions claim side-effect actions and it appears that the Application being examined is a broader interpretation of the '948' Patent. One of ordinary skill in the art would be motivated to use less sub-steps in order to expedite the process or method. As in another example, in claim 5, "target value" is used instead of "attribute value" in claim 10 of the '948' Patent.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

8. Claims 1 – 21 are presented again for further examination.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1 – 3, 5, 9, 12 – 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoenninger et al. (6260058) (hereinafter Hoenninger) in view of Rogers et al. (5946386) (hereinafter Rogers).

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11. As per claim 1, Hoenninger teaches a method for operation of a workflow system for processing an object by executing a plurality of tasks, one or more of said tasks each having one or more associated enabling conditions indicating whether the task is to be executed for said object, (e.g. col. 6, lines 33 – 64), and wherein execution of at least one of said tasks results in initiation of a side-effect action performed by a component external to said workflow system, said method comprising the steps of, (e.g. col. 9, line 49 – col. 10, line 31 & col. 5, line 50 – col. 6, line 10):

12. determining whether a task is eligible for eager execution by considering at least (1) a state of the task, (e.g. col. 6, lines 10 – 64 & col. 10, line 66 – col. 11, line 24), and execution of a task resulting in a subtask and the priority of the tasks and subtasks for execution, (e.g. col. 1, line 59 – col. 2, line 58, “*urgency for eagerness*”, & col. 5, line 50 – col. 6, line 10), but does not specifically teach whether execution of the task results in the initiation of a side-effect action; and

13. executing the task using eager execution if the task is determined to be eligible for eager execution. Rogers teaches execution of the task results in the initiation of a side-effect action, (e.g. col. 11, line 45 – col. 12, line 16, “*call types as types of tasks and vip for eagerness*”, & col. 15, lines 44 – 52, “*ivr for side-effects as described in Applicant’s specification*”); and

14. executing the task using eager execution if the task is determined to be eligible for eager execution, (e.g. col. 15, lines 44 – 52, col. 29, lines 1 – 28, “*State of call*”, & col. 37, line 5 – col. 38, line 52, “*vip for eagerness*”). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Rogers with Hoenninger because it would be more efficient for a system to process call to a system faster if the calls meet the required criteria for a

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hasty execution. Furthermore, it would be advantageous for a system to process a call eagerly when a key on a phone is pressed to tell the system that the call is of extreme importance, (e.g. calling a hospital and the ivr prompting the caller to press 1 if emergency, 2 for hospital representative, 3 for hospital visitation hours, etc.), there for also avoiding certain catastrophe.

15. As per claim 2, Hoenninger and Rogers teach all that is described above and Hoenninger further teaches an action is eligible for execution only if it is determined that the enabling condition associated with the particular task will evaluate to true as determined by the state of the particular task, (e.g. col. 6, line 33 – col. 7, line 42, *“The transition from “blocked” state 53 to “ready” state 51 is therefore characterized by the legend “condition met” 60. The transition from “computing” state 52 to “blocked” state 53 is designated as “waiting for condition” 59.”*). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the ivr side-effects and vip rules of Rogers with Hoenninger’s limitation disclosed above because if the enabling condition of a task, (i.e. call), becomes true, (i.e. ready), it would be advantageous for a system to change the status of the task and evaluate the task as eagerly as possible for similar reasons stated above.

16. As per claim 3, Hoenninger and Rogers teach all that is disclosed above more specifically Rogers teaches determining that a particular task whose execution does not result in the initiation of a side-effect action is eligible for eager execution prior to determining that the one or more enabling condition associated with the particular task will evaluate to true, as determined by the state of the particular task, (e.g. col. 29, lines 1 – 56, *“identify the name and/or affiliation of the*

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caller" & col. 38, line 63 – col. 39, line 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Rogers with Hoenninger because it would be faster for a system to automatically eagerly execute a task, (i.e. call), on the bases of identity that is presented at the time the task is queued rather than having the user wait for a prompt from the system to start processing on the task. Furthermore, if there are no tasks in a queue or being operated on, the first task that enters the system will be eagerly executed for there are no other tasks to interrupt the processing of the task.

17. As per claim 5, as understood by the Examiner, Hoenninger and Rogers teach all that is disclosed above, more specifically Rogers teaches whether the task contributes to the production of a target value, (e.g. col. 2, lines 10 – 34 & col.3, lines 9 – 65, "*Proactive caller identification*", & col. 36, lines 12 – 45, "*vip rule*"). It would have been obvious to one skilled in the art at the time the invention was made to combine Rogers with Hoenninger because if the task does not specifically pertain to the target value, it would be more efficient for only the tasks that contribute to the production of a target value to have a high priority over the tasks that do not contribute the production of the target value.

18. Claim 9 is rejected for similar reasons as stated above and is obvious that a system would want to perform the step of determining repeatedly during the processing of the object because if a system only performed one and only one task and/or side-effect or call, it would not be a very marketable or efficient system. Most, if not all complex computing system that are of the present age and that are well known in the art perform tasks of many types more than once.

19. Claim 12 – 14 and 16 are rejected for similar reasons as stated above.

20. Claims 4, 6, 7, 8, 15, 17, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoenninger (6260058) in view of Rogers (5946386) in further view of Boutaud et al. (6253307) (hereinafter Boutaud).

21. As per claim 4, Hoenninger and Rogers teach all that is disclosed above but do not specifically teach partially evaluating said enabling conditions. Boutaud teaches partially evaluating said enabling conditions, (e.g. col. 45, line 58 – col. 46, line 41, *“If the test is true, the next instruction(s) are executed. If the condition is false, each conditioned instruction is replaced by a NOP.”*). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Boutaud with the combine system of Hoenninger and Rogers because utilizing a very common algorithm/programming code, (i.e. “If, Then, Else”), would cause for a faster evaluation of enabling conditions, (i.e. skipping other conditions in the “Else” branch, example “else (End)”).

22. As per claim 6, Hoenninger and Rogers teach all that is disclosed above but do not specifically teach determining that a particular task is unneeded for processing of the object based at least in part on partial evaluation of an enabling condition of a task which depends on output of said particular task. Boutaud teaches determining that a particular task is unneeded for processing of the object based at least in part on partial evaluation of an enabling condition of a

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task which depends on output of said particular task, (e.g. col. 45, line 58 – col. 46, line 41). It would have been obvious to one skilled in the art at the time the invention was made to combine Boutaud with the combine system of Hoenninger and Rogers because it would be advantageous for a system to utilize a very common algorithm/programming code in many different application throughout the system, (i.e. using for side-effects and tasks), and is therefore utilized for similar reasons as stated above

23. Claim 7 is rejected for similar reasons as stated above because if a system could determine that a task is unneeded for processing of the object then it is obvious for the system to know that the other tasks are needed, “necessary” for processing. If not, then the system would just label all the tasks that are unneeded and no tasks would be processed.

24. Claims 8, 15, 17, 18 and 19 are rejected for similar reasons as stated above.

25. Claims 10, 11, 20, 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoenninger (6260058) in view of Rogers (5946386) in further view of Van Praet et al. (5854929) (hereinafter Van Praet) and Smith et al. (5561762) (hereinafter Smith).

26. As per claim 10, Hoenninger and Rogers teach all that is disclosed above but do not specifically teach wherein a memory of said workflow system stores a graph representing data flow dependencies and enabling flow dependencies between tasks and enabling conditions, said method further comprising the step of:

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27. propagating changes through said graph based on new outputs of completed tasks. Van Praet teaches wherein a memory of said workflow system stores a graph representing data flow dependencies, (e.g. col. 8, lines 49 – col. 9, “*enabling condition*”, line 52 & col. 22, lines 7 – 14 & Figs. 7 – 11), and enabling flow dependencies between tasks and enabling conditions, (e.g. col. 8, lines 49 – col. 9, “*enabling condition*”, line 52 & col. 22, lines 7 – 14 & Figs. 7 – 11). It would have been obvious to one skilled in the art at the time the invention was made to combine Van Praet with the combine system of Hoenninger and Rogers because it would be more efficient if a user had a record of graph representation of the flow dependencies between tasks and enabling conditions so to update a system and keep records of up-to-date information. If records were not updated, the system could call in information that is out-of-date and cause errors in the system.

28. Van Praet does not specifically teach said method further comprising the step of:

29. propagating changes through said graph based on new outputs of completed tasks. Smith teaches said method further comprising the step of:

30. propagating changes through said graph based on new outputs of completed tasks, (e.g. col. 5, line 51 – col. 6, line 50). It would have been obvious to one skilled in the art at the time the invention was made to combine Smith with the combine system of Hoenninger and Van Praet because of similar reasons as stated above.

31. As per claim 11, Hoenninger and Rogers teach all that is disclosed above but do not specifically teach said step of propagating changes is based on predefined propagation rules. Van Praet teaches said step of propagating changes is based on predefined propagation rules, (e.g. col.

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11, line 9 – col. 12, line 60). It would have been obvious to one skilled in the art at the time the invention was made to combine Van Praet with the combine system of Hoenninger, Rogers and Smith because it would be more efficient for a user to keep track of trends in new outputs of completed tasks and enabling conditions if there were a set of predefined propagation rules, (i.e. algorithms), to aid in the graphing of new outputs of completed tasks and enabling conditions.

32. Claims 20 and 21 are rejected for similar reasons as stated above.

Conclusion

33. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

34. a. Dong et al. U.S. Patent No. 6499023 discloses Data item evaluation based on the combination of multiple factors.

35. b. Hayashi et al. U.S. Patent No. 5832455 discloses Work flow support system.

36. c. Brooks et al. U.S. Patent No. 5825869 discloses Call management method and system for skill-based routing.

37. d. Beck et al. U.S. Patent No. 6370508 discloses Interface engine for managing business processes within a multimedia communication-center.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David E. England whose telephone number is 703-305-5333.

The examiner can normally be reached on Mon-Thur, 7:00-5:00.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on 703-308-5221. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is none.

David E. England
Examiner
Art Unit 2143

De 


DAVID WILEY
SUPERVISORY PATENT EXAMINER
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